

### Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

#### Listing of Claims:

- 1 (Canceled)
2. (Currently amended) The flow control device according to claim ~~[[1]]~~ 8, wherein the valve element drive mechanism adjusts an opening degree of the aperture part by the sheet shaped valve element.
3. (Canceled)
4. (Currently amended) The flow control device according to claim ~~[[3]]~~ 8, wherein the sheet shaped valve element extends along the wall part to cover the aperture part by the rolling motion of the rolling element body in the closed direction from a state in which the sheet shaped valve element is wound around the rolling element body and to be wound around the rolling element body to open the aperture part by the rolling motion of the rolling element body in the opened direction from the extended state of the sheet shaped valve element.
5. (Currently amended) The flow control device according to claim ~~[[3]]~~ 8, wherein the aperture part is formed in a shape extended in a rolling direction of the rolling element body.
6. (Original) The flow control device according to claim 5, wherein the shape of the aperture part is formed so as to have different opening widths in the rolling direction of the rolling element body.
7. (Original) The flow control device according to claim 6, wherein the aperture part is formed having the aperture opening width is narrow on one side and wide on the other side.
8. (Currently amended) The A flow control device ~~according to claim 3,~~  
comprising:  
a wall part partitioning an upstream side and a downstream side of a flow passage for fluid;

an aperture part formed on the wall part;  
a sheet shaped valve element which changes from closed state in which the  
sheet shaped valve element extends along the wall part to cover the aperture part to  
an open state in which the aperture part is opened;

a valve element drive mechanism for moving the sheet shaped valve element;  
and

a rolling element body provided in the valve element drive mechanism that  
performs a rolling motion along a wall face of the wall part, wherein the sheet  
shaped valve element is extended along the wall part to cover the aperture part by  
the rolling motion of the rolling element body in the closed direction and changed to  
a state in which the aperture part is opened from the extended state by the rolling  
motion of the rolling element body in the opened direction, and

wherein the wall part is a cylindrical wall part having an inner side formed downstream and the rolling element body performs a planet motion along an outer wall face of the cylindrical wall part.

9. (Original) The flow control device according to claim 8, further comprising a movable body provided in the valve element drive mechanism and rotates about the cylindrical wall part while rotatably supporting the rolling element body,

wherein the movable body is rotated about the cylindrical wall part moving the rolling element body along the outer wall face of the cylindrical wall part.

10. (Canceled)

11. (Currently amended) ~~The A~~ flow control device ~~according to claim 3,~~  
comprising:

a wall part partitioning an upstream side and a downstream side of a flow  
passage for fluid;

an aperture part formed on the wall part;  
a sheet shaped valve element which changes from closed state in which the  
sheet shaped valve element extends along the wall part to cover the aperture part to  
an open state in which the aperture part is opened;

a valve element drive mechanism for moving the sheet shaped valve element;  
and

a rolling element body provided in the valve element drive mechanism that performs a rolling motion along a wall face of the wall part, wherein the sheet shaped valve element is extended along the wall part to cover the aperture part by the rolling motion of the rolling element body in the closed direction and changed to a state in which the aperture part is opened from the extended state by the rolling motion of the rolling element body in the opened direction, and

wherein a first set of outer teeth are formed in the rolling element body and a second set of outer teeth engaged with the first set of outer teeth for rotating the rolling element body are formed on the wall face side.

12-13. (Canceled)

14. (Currently amended) ~~The A~~ flow control device ~~according to claim 13,~~  
comprising:

a wall part partitioning an upstream side and a downstream side of a flow passage for fluid;

an aperture part formed on the wall part;

a sheet shaped valve element which changes from closed state in which the sheet shaped valve element extends along the wall part to cover the aperture part to an open state in which the aperture part is opened;

a valve element drive mechanism for moving the sheet shaped valve element;  
and

a home position reset mechanism for returning the sheet shaped valve element toward a home position where the aperture part is completely opened or toward a home position where the aperture part is completely closed when energization for a motor of the valve element drive mechanism stops,

wherein the valve element drive mechanism drives the sheet shaped valve element from the home position in a specified direction against a force which the home position reset mechanism exerts on the sheet shaped valve element, and

wherein a gap between a field magnetic pole and a magnet of the motor is set to be not less than ~~0.2mm~~ 2mm.

15. (Currently amended) ~~The~~ A flow control device ~~according to claim 13,~~  
comprising:

a wall part partitioning an upstream side and a downstream side of a flow passage for fluid;

an aperture part formed on the wall part;

a sheet shaped valve element which changes from closed state in which the sheet shaped valve element extends along the wall part to cover the aperture part to an open state in which the aperture part is opened;

a valve element drive mechanism for moving the sheet shaped valve element;  
and

a home position reset mechanism for returning the sheet shaped valve element toward a home position where the aperture part is completely opened or toward a home position where the aperture part is completely closed when energization for a motor of the valve element drive mechanism stops,

wherein the valve element drive mechanism drives the sheet shaped valve element from the home position in a specified direction against a force which the home position reset mechanism exerts on the sheet shaped valve element, and

wherein a reduction gear ratio in the valve element drive mechanism is set to be not more than 1/10.

16. (Currently amended) The flow control device according to claim ~~[[1]]~~ 8, wherein the sheet shaped valve element is an elastic sheet.

17. (Currently amended) The flow control device according to claim ~~[[1]]~~ 8, wherein the fluid is gas or liquid.

18-20. (Canceled)

21. (New) The flow control device according to claim 14, wherein the sheet shaped valve element is an elastic sheet.

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22. (New) The flow control device according to claim 14, wherein the fluid is gas or liquid.